ABSTRACT

A permanent magnet motor 1 includes a rotor in which permanent magnets 31 are fixed. In the rotor 20, the outer peripheral shape of rotor

5   magnetic-pole portions 24 is formed so that, in the circumferentially central portion, the distance from the center of the rotor iron core 21 is longest, and, at the inter-polar space, the distance from the center of the rotor iron core is shortest, and so that the outermost surface of the rotor magnetic-pole portions 24 forms an arc, and given that sheath thickness tc formed by the

10   outer-side surface of each permanent magnet 31 and the outermost surface of each rotor magnetic-pole portion 24 is practically constant, and letting the thickness of the permanent magnets be the magnet thickness tm, then the relation $tc/tm \leq 0.25$ is satisfied.